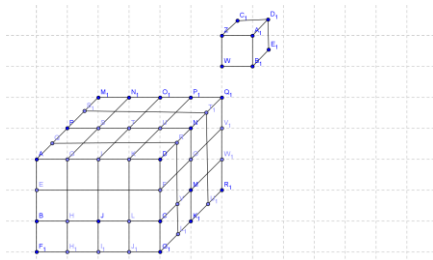
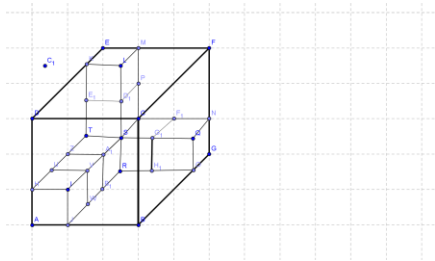


Independent Exploration -- Student Task

1. [Show a multi-link cube] This is a cube, and this is how it is drawn. [point to the drawing at the right]. How many cubes does it take to make the building below? It is completely filled with cubes, with no empty spaces inside.

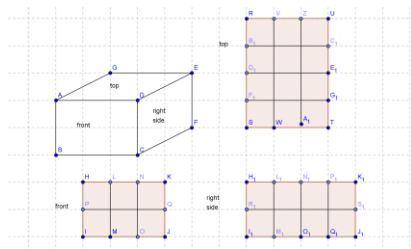


2. If you completely fill the box below with cubes [point to the outer box], how many cubes will be in the box?



3. [Show a multilink cube building that is four by four on the bottom and three high. Place it in an open box, with one face untaped, with one face untaped.] These cubes completely fill the paper box. How many cubes are there? [Take the cube building out of the box. Students can touch the cubes of the box, but can take neither apart.]

4. Suppose we completely fill the rectangular box below with a rectangular cube building. The box is transparent, so you can see the building through the box's sides.



After we fill the box we look straight at the building from its **FRONT, TOP** and **RIGHT SIDE** [indicate orthogonal viewing lines with A pencil.]

From the **FRONT**, it looks like this: [Indicate the figure above and at the left]

From the **RIGHT SIDE**, it looks like this: [Indicate the figure above and at the upper right.]

From the **TOP**, the building looks like this, [Indicate the figure at the Lower right]

- A. How many cubes does it take to make the building?
- B. Can you make the building with cubes?